

PROJECT TITLE : Tobacco Analysis
PERIOD COVERED : May 1st - May 30th, 1980
WRITTEN BY : L. Joseph

Tobacco Lot Analyses

1. Special trials

Denitrated LTR (1) (See enclosed table)

The results of the analyses of two samples (lots No. 7198 and 7195) are available.

The principal differences between the denitrated and the standard trials are, for the denitrated sheet:

- lower NO₃-N level, (70% reduction), consequently lower NO delivery
- lower K level (but only 18% reduction)*
- higher CO delivery
- higher SN delivery (at a similar TA level)
- higher DPM delivery
- lower free combustibility of the sheet (52.3% instead of 69.1% for the standard trial)

Basic MLF blend for ATO (2)

The results of the sieve analysis of the basic blend received from Richmond, were sent to Mr. M. Hansen (3).

Six samples of this basic blend taken by Mr. D. Polack (4) were received on May 21st, 1980. The results of the degradation tests are available.

Marlboro and Chesterfield blends for Algeria (5)

The analyses are under way.

Competitor brands

The results of the analyses of these three brands: Select, Select No. 2 and Select Extra Légère are similar with respect to the principal parameters.

* This indicates a need for anion analyses (citrate, etc.).

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There are, anyhow some small differences to be pointed out on the Select Extra Légère in comparison to the two other brands:

- lower NO3-N level, consequently, smaller NO delivery
- slightly lower CO delivery, TA level and SN delivery
- smaller cylinder volume

Italian tobaccos (6)

Eight samples of FC Italian tobaccos were analysed in order to select growers and varieties.

MD tobaccos, storage influence (7)

We have not yet begun the analyses.

Blending problems with different grades from the same lot

The suppliers harvest and then pack a same lot over a certain period of time. In order to determine if it is necessary to split a lot in smaller parts based on the packaging date, we have analysed four samples of US Burley tobacco from different boxes (from first to fourth quarter of lot 9228). Results are being evaluated.

2. Routine tobacco lot analyses

Introduction of inputs on EDP

Ten lots were introduced in the analytical data list.

Lots under evaluation

Forty-seven lots.

Lots available, but not yet analysed

Thirty-seven lots.

3. Assistance to other projects

Project Spotless (8)

All the cigarettes with treated tobaccos were made. The analyses are under way.

Project RCB

The smoke analyses of the Nino-RCB trials No. 7 and 8 with 5% of washed Nino stems plus the corresponding denitrated extract with (No. 7) and without (No. 8) Ninomass are available. There are no important differences between these samples.

Six samples having a different proportion of ingredients were received (lots No. 0118, 0120, 0121, 0122, 0124 and 0125). The analyses are under way.

Project Nino

The analyses of treated and untreated Burley strips are available.

The principal differences between washed and unwashed strips are that the washed strips contain a:

- lower TA level, consequently, lower SN delivery
- lower NO₃-N level, consequently, lower NO delivery (reduction of about 66% in mg/g of burnt tobacco)
- lower NH₃-N level
- lower tot-N level
- lower chloride content
- lower K content
- higher Ca content
- higher CO delivery per cigarette
- slightly higher DPM delivery per cigarette
- higher puff count (per g of burnt tobacco)
- higher HCN delivery per cigarette
- higher aldehydes delivery per cigarette
- better cylinder volume


L. Joseph

References:

1. Letter from LTR to Mr. H. Boeckle, dated April 8, 1980.
2. Letter from Mr. I.S. Ruziak to Mr. M. Hansen dated March 10, 1980.
3. Letter from L. Joseph to Mr. M. Hansen, dated May 8, 1980.
4. Letter from Mr. D. Polack to Mr. G. Karandjoulis, dated April 15, 1980.
5. Advice note of delivery from Richmond, dated April 18, 1980.
6. Telex from L. Joseph to Mr. Zevenhuizen, dated May 27, 1980.
7. Mr. Karle's report: "Chemical, physical and organoleptic examination of MD tobaccos..., of May 12, 1978", dated September 19, 1978.
8. Spotless monthly report, January 1980.

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Denitrification trial on LTR

<u>Filler analyses</u>		<u>Standard Lot 7198</u>	<u>Denitrated Lot 7195</u>
TA	(%):	0.56	0.56
RS	(%):	5.1	5.4
NO3-N	(%):	0.51	0.15
NH3-N	(%):	0.20	0.18
Tot-N	(%):	2.31	1.73
pH	:	7.3	7.4
Chloride	(%):	1.41	1.40
Ashes	(%):	22.0	20.2
K	(%):	4.61	3.79
Ca	(%):	4.24	4.34
Mg	(%):	0.46	0.42
C.V. at e.m.	(mL/10g):	33.0	34.7
Equilibrium moisture	(%):	11.9	11.9

Cigarette analyses

Tobacco weight	(mg):	1040	1022
Diameter	(mm):	8.00	8.02
RTD	(mm H2O):	112	117
Compressibility	(mm):	3.33 at 11.8% mc	3.01 at 11.3% mc
O.V.	(%):	11.9	11.6

Smoke analyses

CO	(mg/cig):	21.2	28.0
NO	(mg/cig):	0.58	0.21
DPM	(mg/cig):	9.0	10.4
SN	(mg/cig):	0.34	0.42
Puff count	(nbr/cig):	8.2	8.4
HCN	(µg/cig):	171	158
Aldehydes	(mg/cig):	1.56	1.59

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